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ABSTRACT

This study of written language development and instruction of elementary school children found that realistic approaches are needed in teaching language usage, dialects, and registers. These approaches should include a nonrepetitive instructional system accounting for different linguistic abilities, a diagnostic evaluation of children's written language ability, objectives based on language performance and control rather than correctness, and learning environments and activities based on individualized and carefully monitored instructional theories. The study includes discussions of (1) current research in language development and instruction; (2) the question of whether children are learning the language concepts they are being taught; (3) the difference between linguistic performance and linguistic competence; (4) current practices in written language instruction in the elementary schools; and (5) needed research in language development and instruction. Tables recording the results of a test of 30 language arts concepts and the results of twelve language arts tasks which were administered to some elementary school children are included. (Author/DI)

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WRITTEN LANGUAGE DEVELOPMENT AND INSTRUCTION OF ELEMENTARY SCHOOL CHILDREN

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Writing is thinking written down. For all age groups this is a basic definition of written language. A child's purpose, as well as an adult's, in writing is to communicate an idea in the written mode. As a child's language and thought develop, he will want to shape his written ideas using rhetorical and figurative devices.

Writing is connected to reading and speaking in inseparable ways. Writing reflects a child's total language and thought development. Reading is "decoding," as is listening. Writing is "encoding," as is speaking. Thought is needed for deriving meaning in both the reading and the writing operation. In writing, the writer, through his inner voice, controls and shapes thought. In reading, the author, an outside agent, controls and shapes thought. Although the speaking, listening and reading language functions are extremely complex human behaviors, writing tops them as complex human behavior.

How American Children Learn to Write

There is good evidence from research that American elementary-school children are not being taught to write by their teachers and textbooks (Golub, Fredrick, and Barganz, 1971) nor are elementary school children learning the cognitive concepts being taught them in language textbooks (Golub, Fredrick, and Harris, 1971) and (Harris and Golub, 1971)

As a result of studying the French educational system, Rollo Brown, in 1915, concluded that American children were not learning to write as well as French children. He attributed the cause of this failure to a lack of thoroughness of training of teachers, teacher's lack of a fund of knowledge related to written language development and instruction of children beyond the routine of the textbooks, teacher's lack of a systematic knowledge of the English language, teachers' lack of writing ability, and teachers' lack of a wide range of reading materials and literature to stimulate discussion, criticism, and written response

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A survey of written language instruction of elementary school children and their teachers indicates that Rollo Brown's 1915 critiques have not been attended (Golub, Fredrick and Barganz, 1971).

A summary of the research of language scholars on learning and teaching elementary school children to write their native tongue indicates information which teachers should consider in their teaching practices. Teachers should know that language abilities are highly correlated and that oral language, for normal children, is a prerequisite to reading and writing. Although a warm, individualized relationship between a child and an adult is important in early language development, peer influence in language learning increases with age. Vocabulary learning is related to thought and concept development. While a basic vocabulary is represented in early language development, a child's vocabulary needs grow as his interests and activities develop. The measure of vocabulary development must include the addition of new words as well as the new meanings attributed to familiar words and the use of a cross-disciplinary vocabulary required for a variety of content areas. Teachers would be well advised to teach handwriting and spelling as tool skills with the emphasis on vocabulary development.

The teaching of spelling should emphasize the phoneme-grapheme consistencies of English orthography and the morpho-phonemic origins of words and word forms. The most efficient method of teaching irregular spelling is the test-teach-retest method. Pupils taught a phonemic alphabet and given practice in using it tend to be better spellers than pupils unaware of English phonology.

A method for teaching written language to elementary school children should consider the fact that different stimuli tend to affect the quality of written discourse and that the direct teaching of creativity along with adequate classroom time provisions should be provided pupils. When teachers read children's written language they should be aware of the fact that spoken dialect features of the children will appear in their written language unless alternate dialect education has been provided for in the children's language instruction.

A survey of written language concepts presented to elementary school children in their textbooks indicates that these texts: 1) do not teach children how

to write, 2) are unrelated to research finding in children's language development, 3) are highly repetetive, and 4) that they are lacking in a language learning theory upon which to build a language teaching methodology.

These texts are prescriptive in ways which are not faithful to the wide variety of language use in different communications situations. In these texts, elementary school children will find an abundance of repetetive capitalization, punctuation, and usage rules. They will find the irregular, nonreproductive, aspects of morphology and syntax stressed when, indeed, these children might not be aware of the regular, productive, structures of the language. Little is said in these textbooks about the connection between thought, semantics, rhetoric, and figurative language to the writing process. There are no entry and exit tests for determining children's written language development.

Textbooks for prospective teachers of elementary school language arts do not necessarily reflect the content of the language arts texts for children. Language arts texts for prospective teachers are extremely general and express goals in teaching such as: 1) ability to express ideas in an original way, 2) ability to express ideas clearly, 3) ability to organize ideas, 4) ability to distinguish between fact and opinion, 5) development of mechanic skills, 6) knowledge of the history of English, 7) knowledge of the structure of English, and 8) knowledge of American-English usage and language variations. These texts appear to be written for "polite-society" with few directions for the urban teacher. Teachers are not given specific assistance in translating objectives into classroom materials and practices.

Some strong needs stand out in teaching children how to write. Needed are specific objectives and strategies for teaching children how to write. Realistic approaches to teaching about language usage, dialects, and registers are needed. A nonrepetitive instructional system for teaching written language which accounts for different linguistic abilities of urban, rural, and suburban children is needed throughout the school curriculum. This system should include diagnostic evaluation of children's written language ability, objectives based on language performance and control rather than correctness, and written language learning environments and activities based on individualized and carefully monitored instructional theories. The language concepts taught in the schools should have a selective focus on children's written language development.

Current Research in Written Language Development and Instruction

Most recent investigations in children's written language tend to be grouped into five major areas as follows:

1. structured language experiences;
2. advanced oral planning;
3. motivational devices;
4. ITA instruction;
5. related language abilities.

Structured language experiences in the elementary classroom have been used with the intent of improving written compositions of children. Odegaard (1972) concluded that systematic instruction in creative grammar (a grammar oriented towards creating and synthesizing rather than analyzing) helps the child to write creative stories, and to use greater numbers of sentence patterns and different transformations. Martin (1972) found that by having the third, fourth, and fifth-grade pupils focus on 1) the relationship between intonation patterns in oral language, and punctuation signals of written code, and 2) sentence-sense, the ability to differentiate between sentence units, led to a greater mastery in sentence writing skills than did an English curriculum based on traditional grammar. Using fourth-grade suburban students, Miller and Ney (1968) found that systematic oral language drilling, combined with written exercises, led to a greater freedom and facility in writing. Using a curricular sequence in written composition prepared by the English Curriculum Study Center at the University of Georgia, Grimmer (1971) had a group of second-graders study this curriculum for one year. The treatment resulted in significant improvement in written language. Research on the use of structured language experiences indicates that children will incorporate this type of instruction in their writing if they are shown how to do it.

Prewriting activities and advanced oral planning have been investigated as a means of improving written language development. When Beeker (1970), investigated the effects of oral planning on fifth-grade children, interesting findings occurred. Each week, for a three-week period, 78 pupils were shown a short film with no narration, after which either no discussions, class discussions, or paired-student discussions took place. The students then wrote.

Analysis of the three sets of composition revealed that student participation in pre-planning did lead to greater written productivity. However, where no discussion took place, pupils produced the largest number of adjectives and adverbs. Beeker suggests that paired-student discussion is particularly effective with low-ability students.

Huntington's (1972) work was concerned with the effects of pre-writing activities on syntactic complexity and clarity in sixth-grade children's written language. The 169 students of the study were divided into eight groups and each group was subjected to a different pre-writing activity. Because the results yielded no evidence that the instructional variables had any effect on syntactic complexity or clarity of written composition, Huntington felt that syntactic density may be a stable element in eleven to twelve year olds. He also suggested that teacher enthusiasm, atmosphere for writing, and oral interaction among children may be the real determiners in any short term charges that take place.

Not surprisingly, the weight of recent research in children's writing falls into the area of motivational devices. Barnes (1964) found that second-grade students wrote longer stories, used a wider variety of words, and exhibited greater imagination after using small word cards and grooved boards in assembling sentences. Bortz (1970) assessed the written language patterns of intermediate grade children after they had listened to recorded motivational devices followed by written responses. Children exposed to this treatment wrote the greatest quantity and used more sentence complexity. Zanotti (1970) in an attempt to capitalize on the relationship between oral and written composition, analyzed children's written language after they had used tape recorders and found that these sixth graders wrote much longer compositions than did the control group.

Kafka (1971) found that intermediate grade children, in an integrated suburban school district, produced best quality written narrative compositions when not subjected to a visual, auditory, or tactile stimulus. When they did write after being treated with such sensory stimuli, Kafka's results revealed that the visual stimulus produced the most superior written samples. Sharples' (1968) study was also concerned with the difference in responses to different stimuli. He concluded that creativity in written language could not be developed with the mere application of a classroom device

A combination of motivational stimuli and practice in oral expression may develop writing skills. Willardson's (1972) thirty second-graders who had reading instruction in a traditional phonics program were given a supplementary reading program. The students entered recording environments resembling a space capsule, a cottage, a castle, or a tugboat. Inside these, the pupils dictated stories and experiences into a cassette tape recorder. The contents of these tapes were typed, and cassette and typed copy were given to each pupil the following day. These materials served as a partial basis for reading lessons and listening lessons. When a sample of the pupil's subsequent writing was analyzed, according to various indexes of writing maturity and quantity, results showed that their writing skills had improved with this experience.

Continuing with his research with i.t.a., Downing (1967), reported that improved writing occurred when children were taught to read using i.t.a., his criteria consisted of word count, vocabulary, and word repetition as measures. Naiven and Auguste, (1972), reported that in a study investigating creative quality of writing of second-graders, those children who were trained in i.t.a. were superior writers to those trained in T.O.

Writing ability has been compared with other language abilities. In researching black students' syntactic forms, DeStefano (1972) found in her North Philadelphia pupils that the relative frequencies of the various nonstandard forms were generally different for speech and writing. These fifth grade students produced a greater share of nonstandard verb forms in speech than in writing (72 % vs. 58%) Hughes (1953) has shown that written language development is highly correlated with oral language and reading development but independent of intelligence. The implications of his research being that teachers should teach oral and written language concepts and vocabulary skills.

Are Children Learning the Language Arts Concepts Being Taught Them?

In one study done to determine how well children are learning the concepts teachers claim they are teaching to improve the written language development of students, it was discovered that children were not learning these concepts very well (Golub, Fredrick, and Harris, 1971). The primary objectives of

this research were: 1) to identify basic concepts in the English language arts appropriate to and generally taught at the intermediate grade levels, 2) to identify criterion tasks for measuring concept attainment abilities in the English language arts, 3) to develop test items for criterion tasks to measure achievement of these language arts concepts, and 4) to determine how well boys and girls perform on these language arts test items.

In identifying the concepts for testing, the domain of concepts consisted of all those single words or phrases which seemed to be classificatory and which were treated in some way in the English language arts curriculum. Six current textbook series were searched and all classificatory concepts in the body or in the index of these textbooks were recorded. This huge number of concepts was delimited and three areas which seemed to contain the majority of concepts were chosen: 1) Words, 2) Words in Sentences, and 3) Connected Discourse. Words contained concepts related to letters, letter sounds, word parts, word types, and word meanings. Words in Sentences contained concepts related to parts of speech, sentence punctuation, types of sentences, and word functions. Connected Discourse contained concepts related to paragraphs, sentence functions, and letter writing. Teachers were then asked to indicate if they taught the concept in fourth grade, if 80-90% of the pupils knew the definition of the concept and were able to pronounce the concept word or phrase. As a result of this information, thirty English language arts concepts were selected for analysis and testing:

I. Words	II. Words in Sentences	III. Connected Discourse
1. Abbreviations	11. Adjectives	21. Comparison
2. Compound Word	12. Helping Verb	22. Details
3. Consonant	13. Period	23. Explanation
4. Contraction	14. Possessive Noun	24. Greeting
5. Homonym	15. Predicate	25. Heading
6. Short Vowel	16. Present Tense	26. Paragraph
7. Silent Letter	17. Pronoun	27. Return Address
8. Suffix	18. Question Mark	28. Thank You Letter
9. Synonym	19. Sentence	29. Title
10. Word	20. Verb	30. Topic Sentence

The twelve criterion tasks for each concept were:

1. Given name of attribute, select example.
2. Given example of attribute, select name.
3. Given name of concept, select example.
4. Given name of concept, select nonexample.
5. Given example of concept, select name.
6. Given concept, select relevant attribute.
7. Given concept, select irrelevant attribute.
8. Given definition of concept, select name.
9. Given name of concept, select definition
10. Given concept, select supraordinate concept.
11. Given a concept, select subordinate concept.
12. Given two concepts, select relationship.

A total of 355 English language arts items were developed for the purpose of measuring and assessing children's concept attainment of the language arts concepts taught by teachers at the fourth grade. However, pilot studies indicated that the selected language arts concepts were very difficult for fourth graders. The subjects finally tested were 186 boys and 259 girls just beginning the sixth grade in the public school system of Madison, Wisconsin.

Insert Table 1 About Here

Table 1 indicates that the most difficult concepts tested are Adjective, Helping Verb, Predicate, and Topic Sentence. The easiest concepts tested are Question Mark, Thank You Letter, Silent Letter, and Sentence. Table 1 shows that the easiest concepts for girls are not necessarily the easiest for boys. The average difference between boys and girls is about one half of a standard deviation, with the girls ahead.

The concepts dealing with Area 1, Words, concepts 1-10, are the easiest for intermediate grade children. The easiest concepts for boys are Consonant, Short Vowel, and Silent Letter; the most difficult for boys are Suffix and Synonym.

The concepts dealing with Area 2, Words in Sentences, Concepts 11-20, are the most difficult for boys and girls. The most difficult concepts in this group are Adjective, Helping Verb, Predicate, Possessive Noun, and Pronoun; the easiest are Period and Question Mark.

The concepts dealing with Area 3, Connected Discourse, Concepts 21-30, represent middle-difficulty concepts. The most difficult are Heading and Topic Sentence; the easiest are Thank You Letter and Title. In not one of the thirty concepts was a mean score obtained which would indicate a 75% or above criterion level of concept attainment. For the girls, at least eight concepts (mean 8.5 or above) meet the 75% or above criterion level of concept attainment.

Insert Table 2 About Here

Table 2 indicates that neither boys nor girls attain 75% level of task attainment for all thirty of the concepts. The easiest task, Task 1, given the name of an attribute, select an example, barely meets the .75 criterion level for girls only.

A factor analysis of the intercorrelation of the thirty concepts and the intercorrelation of the 12 tasks indicates that there is a common factor for all thirty concepts and a common factor for all twelve tasks. This tends to indicate that there are at least two components of linguistic competence, one component being a child's Linguistic Awareness, LA, learned either intuitively or through instruction; the other component, the child's Language Processing Ability, LPA, his thought processes available for thinking about language

Children's Written Language Development

Chomsky (1965) has suggested that there is a difference in linguistic performance and linguistic competence. In an educational context, performance can be described as what the teacher hears or sees of the child's language; competence can be described as the child's ability to manipulate and derive meaning from the structure of the language, a sort of linguistic ability or linguistic awareness which a child possesses.

Language competence is difficult to measure. Although we will probably never know precisely the components of language competence, we can now make some inferences concerning a child's language ability. The Linguistic Ability Test, LAT, (Fredrick, Golub, and Johnson, 1970) is a carefully designed and successful measurement instrument with a Hoyt reliability of .95 and a validity score of .84 when correlated against syntactic density measures and a validity score of .75 when correlated against teacher ratings of the children's writing ability. The LAT will give an indication of language ability variables in the following areas:

1. Ability to derive meaning from syntax
2. Ability to distinguish probable from improbable English grapheme clusters
3. Ability to determine pronoun referents
4. Ability to recognize words in the child's lexicon, given a clue from predictable phoneme-grapheme correspondences
5. Ability to transform an English sentence to a synonomous sentence by changing the structure but not the content
6. Ability to recognize morphemes as roots, prefixes, and suffixes
7. Ability to recognize form-class and function positions in a sentence
8. Ability to use the deletion transformation
9. Ability to recognize phoneme equivalents of various English graphemes and grapheme clusters
10. Ability to recognize the structure of various question transformations in order to produce the appropriate response structure
11. Ability to recognize logical meaning relationships between elements of a sentence
12. Ability to transform a verb phrase

The LAT is a paper and pencil test designed specifically to test the psycholinguistic ability of intermediate grade children. The directions and the test items are on tape and are read to the children while they follow along on the printed page. The taped reading of the test eliminates the question of reading difficulty which some children would naturally bring to the test.

Past attempts have been made at quantifying and describing children's written and spoken language performance. Children's oral discourse must be transcribed into a written form before it can be tabulated. As a result of studies in children's syntax (Golub and Fredrick, 1971), the author has dervied a Syntactic Density Score which can be used to determine the syntactic density of written materials from Grades 1-14. A computer program is also available for this tabulation which is as reliable as hand tabulation. A computerized Vocabulary Frequency Index is also under development.

The Syntactic Density Score which measures language performance consists of the following variables:

1. Total number of words
2. Total number of T-units
3. Words/T-unit
4. Subordinate clauses per T-unit
5. Mean main clause length
6. Mean subordinate clause length
7. Number of modals in the auxiliary
8. Number of Be and Have forms in the auxiliary
9. Number of prepositional phrases
10. Number of possessive nouns and pronouns
11. Number of adverbs of time

All eleven of these variables significantly distinguish good teacher-rated discourse from poor, teacher-rated discourse.

Using the two scores, the LAT scores as a linguistic ability (awareness) measure and the Syntactic Density Score as a language performance measure, the author compared the written discourse of black, white, Indian, and Spanish-American intermediate grade children, (Golub, 1973). The results of this research are striking for educators interested in children's written language development.

Given the conditions for gathering the samples of the children's written discourse, there were no significant differences between the four ethnic groups in the syntactic density scores of these children's writing. That is to say that in the measure of linguistic performance, black, white, Indian, and Spanish-American children from similar socioeconomic backgrounds write equally

well. After four to six years in school, these children had learned, equally well, to produce written language with manageable, understandable, and logical syntactic forms. There were, however, significant differences between all four ethnic groups in language awareness as measured by the Linguistic Abilities Test. The black, Indian, and Spanish-American children being similar but significantly different from the white children. This research indicates that teachers can expect the following linguistic awareness differences among the four ethnic groups.

1. The Spanish-American child will be at a disadvantage in gaining the meaning of a word or phrase from its context, syntactic position or syntactic marker.
2. The black child will use a different set of rules for agreement of pronouns and their referents.
3. Both the black and the Indian child will have a problem of inferring the pronunciation of a word they can say from its graphemic representation on the printed page, or indeed doing the opposite, inferring a logical spelling of a word from its pronunciation.
4. The black child will have different transformations for deriving synonomous sentences.
5. The black child will use standard morpheme affixes differently from the white child.
6. The black child will use deletion, question, and verb phrase transformations in ways different from the white child.
7. The black child will recognize different logical meaning relationships between syntactic elements of a sentence.

Rather than look at syntactic density and expression of ideas in children's writing, teachers are more inclined to look at the deviations or errors on a child's written paper. In a study in linguistic deviations in children's writing, (Golub and Fredrick, 1970), this author found that when the number of deviations, both lexical and syntactic, in each theme was tabulated and the theme quality, as measured by experienced teachers, determined, the correlation coefficient between these two measures was 25. However, when deviations per number of words was computed and the correlation coefficient between these and theme quality was obtained, the relationship proved significant ($r = .64$;

$p < .001$) This statistic indicates than an aspect of theme quality is the number of deviations per amount written. As the density of deviations per words decreases, the quality of children's written discourse is judged better by their teachers. This same research also points to the language needs of children considering the lexical and syntactic deviations found in their written sentences. Of the 1683 syntactic deviations found in a corpus of 20,000 words of intermediate grade children's writing, only twenty-four linguistic concepts were involved. This seems to indicate that teachers might teach to these twenty-four linguistic concepts for correctness in writing rather than to the whole universe of possible written language deviations as presented in most English language arts textbooks written for children. Especially since children do not seem to be learning what is in these textbooks anyway.

In analyzing the lexical deviations of intermediate grade children, the author found that many of these lexical deviations are the result of problems of vocabulary development and word selection rather than spelling. Only one half of the 1001 lexical deviations out of a 20,000 word corpus could be attributed to spelling. Of these spelling deviations, many result from omission, addition, or substitution of a single letter. The children do know how to "spell," though it might not be the way their teachers and parents would wish them to spell. The list of scrambled letters and unknown words is small, less than 100 such errors in 20,000 words.

Lexical deviations can be placed into a few convenient categories as could the syntactic deviations. The existence of meaningful categories suggest that both lexical and syntactic written language deviations are susceptible to a cognitive learning approach rather than a rote-memory approach.

In a study on stimulating and receiving children's writing (Golub, 1971), this author has attempted to trace the cognitive development of children as it is displayed through their written language. In discarding the mechanical and grammatical dictates of the language arts texts, the teacher is faced with a nine through twelve year old child who has learned to read some simple and not so simple prose, who has learned to manipulate the pencil at an excruciatingly slow rate, and who has thoughts on his mind which he wants to express in writing and aloud with other children.

Writing is a growth process. Although most children, who are native speakers of English upon entering school, know the rules of an introductory transformational grammar, they have no explicit grammatical or rhetorical knowledge. This preschool linguistic genius communicates like a child. He has difficulty relying exclusively on language, he will show egocentrism by using terms and experiences not shared by the listener, and he will fail to use contrasts so that the listener can associate similarities and differences, thus assuming that the listener knows more about the subject than he actually does.

In asking a nine year old child to write a story he has heard, the teacher must be aware of the child's ability to order information so that the reader has consecutive information at each point of the narration, the teacher must be aware of the child's ability to embed sentences to convey likely figure-ground relationships, the teacher must be aware of the child's logical cojoining of words and sentences, the teacher must be aware of the child's ability to shift styles depending upon his intended reader, and the teacher must be aware of the child's ability to use metaphore to capture similarities and differences in a situation. None of these abilities are dependent upon grammatical knowledge and none are well developed in children or in adolescents.

In spite of all we know about the structure of English, there is very little we can do to make a child write like an adult, a first grader like a fourth grader, a seventh grader like a twelfth grader, or a twelfth-grader like a professional contributor to Atlantic or Harpers. Yet children who are learning to read must simultaneously be learning to write. In the classroom, stimuli for eliciting children's writing should permit the child and the teacher to become aware of the linguistic and rhetorical problems in writing. The quasi-linguistic problems such as spelling, capitalization, and punctuation, so apparent to an adult in examining children's writing, should be deemphasized. The teacher should attend to the child's linguistic and rhetorical development which is as inevitable as a child's physical development. The teacher must learn to "receive" children's writing so that the teacher accepts the child's message without criticizing the language of the message. The teacher must then respond to the message in such a way that his response suggests a stimulus to which the child can once again respond in either the oral or the written mode.

In the first and second grades, children display good kernel sentence sense in their writing. Not all children can place these kernels in a logical order.

The second grader can pack more information into each writing sample than can a first grader. The problem of egocentrism is evident in the first and second grades where the world of experience is translated through the child's feelings. By the third grade, the child is writing in cursive and using coordination and subordination to express relationships. His egocentrism appears more appropriate to the subject. The child will start to express his value system which might clash with the value system of the teacher. In grade three, the child starts to think more independently.

By the fourth grade the child writer can grasp a sense of audience and starts to express his own voice. Time sequences became better defined as the child learns to control grammatical tense, modal, and aspect. At this level, the child makes a real effort to control and order the sequence of events.

An important change happens between the fourth and fifth grade in the development of the child's thought and language process. There is a complexity of events in the child's expression which is also obvious in his complex sentence structure. At this level, the need for the skillful use of coordination and subordination becomes apparent for expressing casual relationships and contrastive, depth-of-field, relationships. The child at this level will attempt to recreate a world of vicarious experience.

The language and thought development between fifth and sixth graders is not so striking as between fourth and fifth graders. The sixth grader shows definite signs of creativity defined as imaginative and different. This creativity is not bizarre writing, but rather, an expression of the child's sincere individuality, his ability to order his perceptions and language, his ability to obtain psychological depth-of-field to show contrasts and similarities, and his ability to test hypotheses and to reach generalizations which must also be tested.

Written Language Instruction in the Elementary Schools

Practices which seem to pay off in the teaching of written language in the elementary school classroom are those practices which involve the student immediately with a stimulus for thought, some time to think quietly or aloud to another student about the stimulus, followed by time to write, followed by

time to read and to evaluate aloud to peers what has been written. The teaching of writing in the elementary school classroom, then, must involve: 1) stimulus for thought, 2) oral language, 3) written language, 4) reading, 5) another person's response to the message, and 6) repetition of the cycle. It is interesting to note that the work habits of important writers seem to reflect this same pattern. Henry James, for example, seldom wrote a word with pen or pencil, but rather spoke aloud to his amanuensis who typed the author's words directly on the Remington. The novelist would then reread to himself and others, revise, and evaluate his craft before sending it to the publishers. Any writing program which does not include these sequential steps would, indeed, be an unnatural program.

This author has described such a program in detail (Golub, 1970a) and he has shown that students who participate in such a program will produce more grade increases at the .01 level of significance than those children who do not undergo such a program.

In "Teaching Literature as Language," (Golub, 1970b) this author has discussed the use of literature, particularly black-American and African literature in the classroom for eliciting structured responses to the literature. The language games and activities initiated from the literary selections are the following:

1. Repetition games
   Repetition of sounds, words, lines after the teacher
2. Substitution games
   Substitution of vocabulary within form-class slots
3. Expansion games
   Expansion in the verb string, verb phrase, or noun phrase
4. Structure games
   Using a variety of morphemic and syntactic structures possible within a sentence, changing only one structure at a time
5. Transformation games
   a. Single-base transformation starting with a declarative sentence and going to emphatic, question, negative, imperative, expletive, and passive
   b. Double-base transformations; additions of kernels in subordinate and coordinate contrasts

These techniques are based upon techniques used in second language learning as well as the tradition of altering the narrative or poetic word in oral cultures such as found in the African tribal languages.

In eliciting children's writing under different stimulus conditions, (Golub and Fredrick, 1970a), these authors concluded that the instructions to the students were not effective in causing any major changes in the quantity or complexity of children's writing. The effect of using color vs black-and-white pictures for the stimulus was significant for a number of linguistic variables. Several kinds of linguistic structures appeared more often in themes written in response to black-and-white pictures. For example, black-and-white pictures produced more clauses, especially subordinate noun and adverb clauses, more types of sentence patterns, more clauses per T-units, more multi-clause T-units, more single-base transformations, more modals, more adverbs, especially adverbs of time, and more prefixes than did color pictures. The color pictures, however, brought more adjectives, more participal phrases, and slightly longer clauses. The responses to black-and-white pictures appeared to be in terms of more complexity and more diversity of structure; the color pictures, more the result of description.

The children in this study found that abstract pictures were more difficult to write about than concrete pictures, as judged by raters. More fragments and false sentence starts occurred and often students resorted to writing a list of nouns, tabulating what they saw in the abstract pictures rather than writing about the picture. The concrete pictures produced more adverbial clauses and adverbial modification than the abstract pictures. Such adverbial modification was indicative of the larger amount of story telling and explanation produced from the concrete pictures.

The black-and-white pictures produced better teacher-rated themes than the abstract pictures, but, again, not at a statistically significant figure. The themes written by girls were rated significantly higher by teachers than the themes written by boys ($p < .01$). In "Language Awareness as Thought Process" (Golub, 1971a) the author discusses the correlation of language development and thought in the elementary school child as outlined by Piaget and Inhelder (1969) and Vygotsky (1962). The author shows how, starting with the fourth or fifth

grade the child can start to learn and to display his grasp of the attributes of certain language concepts so as to expand the child's language awareness and thought process. The schema proposed for learning about a language concept is 1) area of focus, 2) concept name, 3) definition, 4) supraordinate concept, 5) ordinate concept, 6) subordinate concept, 7) example, 8) non-example, 9) relevant attribute, 10) irrelevant attribute, and 11) principle. In order to go through the schema, the child and the teacher must have a "content-specific" vocabulary which permits them to discuss the concepts involved. By arranging the kinds of thought process activities in progressive order, it is possible to develop language awareness in elementary school children which they can bring to their writing experiences.

Needed Research in Written Language Development and Instruction of Elementary School Children

1. A computerized syntactic density score (SDS) which will give teachers and researchers an immediate reading of a child's language development in relation to his peers.
2. A computerized vocabulary frequency index (VFI) to be used along with the syntactic density score.
3. A way of correlating the SDS and VFI of a child's writing with his reading materials.
4. A language learning program in the elementary schools which incorporates reading with oral and written language development so that new language goals are set for the child as he progresses from level to level of the school curriculum. Such a program should prepare the child for the writing needs of the secondary school but need not contain the same objectives.
5. A clearer definition of the uses of oral and written language in the "real" world of the child as he progresses from elementary, secondary, college, to the world of work.
6. An analysis of caste and class distinctions conveyed through written language.

7. Methods of individualizing written language instructions to meet the needs of varying written language development abilities.
8. Performance criteria and objectives to measure language and thought development of elementary school children.

Table 1

Language Arts Test Results for the 30 Concepts

No.	Concept	Boys (N = 186) Mean	S.D.	Hoyt R.	S.E	Girls (N = 259) Mean	S.D.	Hoyt R.	S.E.
1	Abbreviation	6.8	2.8	.71	1.5	8.4	2.6	.72	1.3
2	Compound Word	6.8	2.7	.69	1.5	8.5	2.5	.70	1.3
3	Consonant	7.3	2.6	.67	1.4	8.4	2.4	.68	1.3
4	Contraction	6.2	2.9	.73	1.5	7.6	3.0	.77	1.4
5	Homonym	6.8	2.7	.69	1.4	8.3	2.5	.69	1.3
6	Short Vowel	7.5	2.9	.76	1.4	8.6	2.7	.75	1.3
7	Silent Letter	7.4	2.8	.70	1.4	9.0	2.6	.74	1.3
8	Suffix	6.0	3.3	.80	1.4	7.2	3.3	.80	1.4
9	Synonym	6.1	2.8	.68	1.5	7.6	2.7	.70	1.4
10	Word	6.8	2.8	.71	1.4	8.0	2.6	.70	1.4
11	[illegible]ctive	4.6	2.6	.65	1.5	5.5	2.9	.72	1.4
12	Helping Verb	4.9	2.2	.47	1.5	5.7	2.3	.52	1.5
13	Period	7.0	2.7	.67	1.5	8.5	2.4	.68	1.3
14	Possessive Noun	5.8	2.7	.67	1.5	6.9	2.7	.69	1.4
15	Predicate	5.1	2.7	.67	1.5	6.3	3.0	.74	1.5
16	Present Tense	6.0	2.7	.68	1.5	7.1	2.7	.72	1.4
17	Pronoun	5.5	2.7	.66	1.5	6.5	2.8	.72	1.4
18	Question Mark	7.9	2.9	.76	1.3	9.6	2.5	.77	1.2
19	Sentence	6.9	2.9	.72	1.5	8.7	2.7	.75	1.3
20	Verb	6.3	2.8	.69	1.5	7.1	2.9	.75	1.4
21	Comparison	6.2	2.9	.72	1.5	7.4	2.8	.72	1.4
22	Details	6.1	2.7	.68	1.5	7.3	2.8	.73	1.4
23a	Explanation	6.0 (6.5)	2.7	.70	1.4	6.7 (7.3)	2.7	.72	1.4
24	Greeting	6.7	2.6	.67	1.4	8.0	2.4	.67	1.3
25a	Heading	4.9 (5.3)	2.3	.59	1.4	5.9 (6.4)	2.5	.69	1.3
26a	Paragraph	6.5 (7.1)	2.7	.71	1.4	7.7 (8.4)	2.6	.75	1.3
27a	Return Address	6.9 (7.5)	2.3	.64	1.3	8.1 (8.8)	2.0	.57	1.2
28a	Thank You Letter	7.2 (7.8)	2.7	.74	1.3	8.6 (9.4)	2.3	.73	1.1
29	Title	7.2	2.9	.73	1.4	8.7	2.4	.68	1.3
30	Topic Sentence	5.1	2.4	.58	1.5	6.4	2.7	.67	1.5

[a]Denotes concepts tested by 11 items rather than 12. These concepts did not have appropriate subordinates as required in Task 11. The numbers in parentheses are extrapolations based on 12 items.

Table 2

Language Arts Test Results for the 12 Tasks

Task No	No. of Items	Boys (N = 186) Mean	S.D.	Hoyt R.	S.E.	Girls (N = 259) Mean	S.D.	Hoyt R.	S.E.
1	30	19.4	6.3	.87	2.2	23.1	5.3	.86	1.9
2	30	17.2	6.3	.86	2.3	20.7	5.7	.85	2.2
3	30	18.0	5.9	.84	2.3	21.4	5.2	.83	2.1
4	30	18.0	5.4	.80	2.4	21.0	5.3	.82	2.2
5	30	16.6	6.1	.84	2.4	19.8	5.4	.83	2.2
6	30	15.4	6.3	.85	2.4	19.0	6.3	.86	2.3
7	30	14.4	5.2	.75	2.5	16.8	5.3	.78	2.5
8	30	15.6	7.0	.88	2.4	19.3	6.8	.89	2.2
9	30	16.3	6.6	.87	2.4	19.5	6.4	.87	2.2
10	30	16.1	6.3	.85	2.4	19.4	6.0	.86	2.2
11a	25(30)	11.4(13.7)	4.3	.72	2.2	13.5(16.2)	4.4	.75	2.2
12	30	12.3	5.2	.78	2.4	15.1	5.7	.82	2.4

Task No.	Task Description	Mean Number Correct for Boys and Girls	Rank-Order of Tasks
1	Given name of attribute, select example.	21.6	1
2	Given example of attribute, select name.	19.3	4
3	Given name of concept, select example.	20.0	2
4	Given name of concept, select nonexample.	19.8	3
5	Given example of concept, select name.	18.5	5
6	Given concept, select relevant attribute	17.6	9
7	Given concept, select irrelevant attribute	15.8	10
8	Given definition of concept, select name.	17.8	8
9	Given name of concept, select definition.	18.2	6
10	Given concept, select supraordinate concept.	18.1	7
11a	Given concept, select subordinate concept.	12.7 (15.2)	11
12	Given two concepts, select relationship.	14.0	12

[a]Five concepts did not possess appropriate subordinates. The numbers in parenthesis are extrapolations based on 30 items.

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